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THOUGHTS *upon* THINKING, 3.

O R,

A New Theory of the Human Mind;

W H E R E I N

A Physical R A T I O N A L E

O F T H E

Formation of our IDEAS, the PASSIONS, DREAMING, and
every FACULTY of the S O U L,

Is attempted

Upon PRINCIPLES entirely NEW.

By J. RICHARDSON. *K*

*I applied mine Heart to know, and to search, and to seek out Wisdom, and the
Reason of Things. Ecclef. vii. 25.*

——— *e caelo descendit, γνῶσις σταυρὸν,*
Figendum & memori traclandum pectore, —

Juvenal.

My Father ! —methinks I SEE my Father
——in my Mind's Eye.

Hamlet.

Entered in the STAMP-OFFICE according to Act of Parliament.

L O N D O N,

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LAR, in the *Strand* ; and Mess. HENRY and CAVE, at *St. John's-Gate*. Price 1s. 6d.
M.DCC.LV.

THOUGHTS UPON THINKING

A New Theory of the Human Mind;

A Physical Explanation

OF THE

Formation of our Ideas, the Passions, Dreams, and
every Faculty of the SOUL.



By J. RICHARDSON.

LONDON: Printed and Sold by J. JOHNSON, in Pall-mall.

1790.

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1790.

W. D. M.

Printed by J. JOHNSON, in Pall-mall.



To All my Good FRIENDS,
The Worthy PROMOTERS, SUBSCRIBERS for the
Printing, and PURCHASERS,

O F

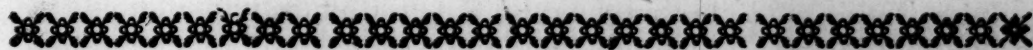
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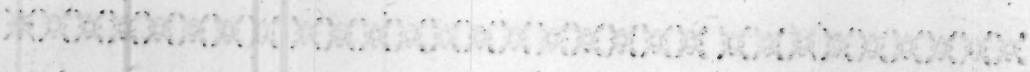
ERRATUM.—In the Last Line of the Note of Page 6, for *Animi*
read *animi*



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The AUTHOR.





THOUGHTS *upon* THINKING, &c.

HAVING some Years ago read over several learned and justly celebrated Authors, as Lord BACON, DESCARTES, FENELON, BROWNE, LOCKE, CLARKE, WATTS, WOLLASTON, BERKELEY, CHEYNE, BAXTER, LEIBNITZ, and Others, for my Information about some Things which I greatly desired to know, namely, what are, and wherein consist, Animal Life, Self-consciousness, Volition, the *Æ*tiology of Thinking, and the Physical Cause of the Passions; but not receiving the Satisfaction * I expected, (for tho' they have given a curious Detail and History, if I may so call it, of the Operations of the Mind, and proved many excellent Truths, yet to me they don't appear to have looked enough into the secret Spring of Things) I set myself to consider the Matter with the deepest Attention I was capable of exerting.

Some few of the Thoughts and Observations I then had and made I have lately revised and flung into the following
B Order,

* In this I happened not to be singular. The pious and learned Dr. WATTS, in his Preface to his Philosophical Essays, speaking of Mr. LOCKE, says, 'But there are some Opinions in his Philosophy, especially relating to Intellectual Beings, their Powers, and Operations, which have not gained my Assent.' And further, with great Resignation, he says, 'If we can never find out how our Spirits form their Ideas, &c. it becomes us to lie humble at the Foot of our Maker, the Infinite and Almighty Spirit, and to content ourselves under our present Ignorance.'—But I hope I have made the Discovery.

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Order, and now beg Leave to communicate them to the Publick as an Incitement to others to a further Pursuit.

SECTION I.

WHOEVER will strictly attend to and observe what passes within himself will find that *Thinking* in general, or having or forming Notions or Ideas of Things, with whatever Degree of Intention, or even in the most abstracted Manner, is no other than having Secondary Sensations (*ab intra*) of Objects of which we have had immediate, actual, or real Sensations before (*ab extra*) by some or other of the Organs of the Senses; and that the *Rationale* of the whole Human Understanding (Self Conscioufness, Volition, Imagination, Judgment, Memory, or any other Faculty or Attribute of the Soul whether active or passive,) is from these Primary and Secondary Sensations entirely deducible*.

Or, perhaps, *Thinking* may not unaptly be defined a Mimicking, or acting over again, every Kind of Sensation, performed by the same Organs, (in the more interior Parts of their Construction) but the Impulse being different, and exerted in a different Manner, from that exhibited by real Objects. [See *Sect. VII.*]

When what follows shall be rightly considered, I will appeal to the Experience of every one, who has had *Thoughts*, for the Truth of what I advance.

In the mean Time, let it be remembered that Sensation is
pro-

* So just is that old Axiom, *Nil est in Intellectu quod non prius fuit in Sensu*; to which I think may be added, *Intellectus Animi Sensus Secundarius est*.

properly Feeling; that by Primary or Actual Sensation I mean our Consciousness of the Presence of an Object, either in the more refined Way, by the Mediation of Light and Air, as in Seeing and Hearing, or in the grosser or more palpable Manner, by immediate Contact, as in Smelling, Tasting, and Touching; and that by Secondary Sensation I mean our Consciousness of its Repreſence, or Representation, when we think or fancy we See, Hear, Smell, Taste, and Touch or Feel it again in our Minds.

How this Sensation is carried along the Nerves to the common Sensory, or wherever the Seat of the Soul is, whether by a Vibration of their fine solid Threads, or by an Undulation of some Fluid supposed to be contained in them, or rather by the quick Motion of Electrick Fire*, is out of the present Question; tho' I am inclined to believe the last, and think it very happily supplies the Place of the old fictitious Animal Spirits.

Neither seems it altogether necessary here to explain minutely how Vision, Hearing, &c. are performed by and upon their respective Organs, which would take up a good deal of Room and the Reader's Time, whom therefore I shall refer to the Writers in Opticks, &c.

* See the ingenious Mr. FREKE's Treatise.



S E C T. II.

HOW we come then to know that we exist, or are in Being, or what is Self-consciousness, seems to be the First Question that should occur in this Research. Now, as far as I can possibly look into myself, or back to the Beginning of Life into which my Maker awaked me out of a State of Insensibility, dressing me up in Body, I cannot find it to spring from any Thing besides that universal Feeling, Sensation, or Perception, which we have of ourselves, and this Material World, and its Parts (or the glorious Objects it exhibits) round us.

We cannot be sensible or conscious that we see a Thing without seeing it, or that we have known or seen a Thing without having known or seen it. I can never be conscious of my own or any other Thing's Being without first feeling, seeing, or being sensible (some how) of both. These must be self-evident Truths, the first Principles of all Demonstration.

But here an Inference immediately arises, too momentous to be neglected or overlooked; and that is, that the Mind or Soul must be something distinct from Body or Matter, and have *pre-existed*, (how long is out of the Question) and that, if it had had its Working Tools or Instruments of Knowing sooner, it would have known or become acquainted with Things sooner.

This to me appears to be very just. The Organs of the Senses are indisputably the Soul's Instruments of Knowing
and

and Perception in this State. But how it existed, or will exist, when divested of its Vehicle, we cannot form the least Notion or Idea. This we are sure of, that it must be after a Manner quite different from that of its present Existence.

The sage and learned Bishop of C——ke, (the Author, as I have been told, of that Book) in his Procedure of the Understanding, says (Page 76) that ‘Whatever the Manner of Knowing is in pure Spirits, it is no more performed by *Thinking** than their Motion is by Walking, or Running, or Flying.’ And indeed, tho’ I cannot agree with him in every Thing, he writes with great Perspicuity, especially where he treats of Mr. LOCKE’s Doctrine of the Ideas of Reflection, which he has in my Opinion unanswerably refuted.

Yet all this affects not a future State of Rewards and Punishments, nor the Immortality of the Soul, nor the Resurrection of the Body, which their First Maker can restore to one another, in his own good Time, after the Dissolution of their Union in this State.

* See Psalm cxlvi. 4.



S E C T. III.

THE Mind then, thus accoutred with Body or a Material Machine, (besides unavoidable Consciousness) we find to be endued with Volition or Will, that is, as I take it, a Power of Chusing or Rejecting, of Acting or Not Acting, whether with regard to moving that Machine and receiving real Sensations, or Thinking; which is the next Thing that falls under Consideration. And to me it appears to be no other than its resolving upon, or determining itself to, this or that, viz. to act or not to act, &c. which seems to be caused by its Attraction or Inclination to Things agreeable, or Disinclination or Repulsion from Things disagreeable, springing from a Belief, or Pre-consciousness acquired by Education or Experience, that the Things are so, or so. And this Inclination and Disinclination, which as it were stimulate the Will, begin to appear in Children even in their Infancy. This also seems to be in some Sort evinced by the almost irresistible Force we find in the Passions.

It is true, indeed, we can do Violence to Volition by willing Things disagreeable or contrary to this Attraction or Inclination; but then it is always against the Grain and with Reluctancy, as in the Case of making painful Applications, or doing Things ungrateful, in order to avoid or get rid of some greater Inconveniency or Evil; or of leading an austere Life, full of Mortification and Self-denial here, to secure one pleasanter, happier, and everlasting hereafter.

If it should also be said, that perhaps Volition may be (or be caused by) some deep (never to be fathomed) original Instinct,

instinct, co-etaneous and co-essential with the Soul, and objected to as putting us on a Level with Brutes; may it not be answered that the Instinct of Beasts is of God's own implanting, and has never yet been tolerably accounted for? and that Light and Air are not less valuable for being enjoyed in common with us by the whole Animal Creation?

Or may it (the Will) not be, in a great Measure, the Result of some peculiar Kind of Magnetism, (or rather Property analogous to it) arising from animated Matter, or Mind and Matter united?

Might not the various Influences of Attracting and Repelling Objects (Beauty, Musick*, Hunger, Thirst, Objects of Fear and Hatred, what Physicians call the Non-naturals, &c. in their various Modes,) upon it be here also considered?

And do not we actually often find it affected by the Power of Rhetorick or Persuasion, and so far from being absolutely free and independent, that it is rather commonly a Slave to Faith and Opinion, and often to the Passions, as in Youth, when they are for the most Part too strong for Reason? But of this more when we come to treat of the Passions. [See Sect. X.]

But still, for all this, it is granted that the Mind, (with respect to Moral Liberty and Necessity) in its calm, unbiassed State, has a Power, or is at Liberty, to do a Thing, postpone it, or not to do it at all. And therefore if, upon Ad-

* This is conspicuous in that Dancing in general is excited by some Modes of it, and in the Cure of the Poison of the *Tarantula*.

Admonition of the Consequence, either from its own Knowledge, or the Information of another which it ought to credit, it makes a wrong Choice or Determination, it is inexcusable and justly incurs a Penalty, suffers Loss, or is liable to Punishment; as, on the contrary, if it makes a right, it is entitled to all the accruing Advantages or Reward. The Law, in some Cases, makes a Distinction between a Crime committed in the Heat of Passion, being highly tempted or provoked to it, and one committed coolly and deliberately without such Temptation or Provocation.

S E C T. IV.

THUS much being premised concerning Conscioufness and Volition, it follows next in Order that it should be shewn (which is the chief and main End of this short Essay) how the Mind exerts that wonderful Power or Faculty of calling back to a Second View, or Consideration, Objects that are past and gone; or, in other Words, how it forms Ideas or Thinks. And here, if he has not as yet, I flatter myself that the Reader will begin to find something New; for, with the Reverend and very Learned Mr. WOLASTON, I can truly and safely say that what I am going to advance, and which is *the prevailing Thought that runs thro' the Whole*, I never met with any where. *

I have observed then (after considering it in the deepest and most abstracted Manner I was capable of) that the Mind, or Soul, never Thinks, that is, Studies, Remembers, or Imagines, any Thing, without using (tho' sometimes almost in an imperceptibly small Degree) the Organs of that Sense

* See Religion of Nature delineated, Page 6.

Sense, which the Ideas it has in Consideration belong to, the same Way as if it was actually perceiving what they represent by immediate Sensation. For Instance; when I reflect on any of the Objects of Seeing or Hearing with great Intention, I cannot help putting the Organs of the respective Sense in the same Posture, Frame, or Disposition, (call it what you will) as if I was actually perceiving what I was only thinking on, and am conscious of a Sensation (tho' also in a small Degree) of the same Kind as at first, a Notion of Distance of Time and Place always associating or accompanying, that is, when and where what I am thinking on happened.

Some Painters will draw a good Likeness by the Strength of their Memory: Have not they then a Consciousness of the same Sensation of Vision as if they were actually looking at the Original?

Does not One's humouring a Story when he tells it, and our often as it were unawares acting the Part we are thinking on when we contemplate with excessive Intention, especially in any of the Passions, that is, our behaving so as if we were actually Seeing, Hearing, &c. what we only do in Imagination, seem to confirm this? And does not our Compassionating and Sympathizing with Objects of Pity in Distress, and entering into the same Humours and Passions with the Players in a well-acted Scene, still illustrate the Matter a little further? *

C

And

* When any one upon a Journey is travelling on Foot or Horse-back along a Road he has often gone before and is well-acquainted with, he may observe how naturally and successive'y the Parts not yet, but soon to be, in Sight arise in his Mind,

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And here I would have it observed that, when I speak of Postures, Frames, &c. of the Organs, when the Soul Thinks, I do not mean the exterior Parts of these Organs, as, for Instance, that there is Occasion for the Action of the Muscles and Nerves which move the Eyes, (tho' that sometimes will happen when we are passionately intent upon a Thing) that being only requisite for Primary Perception, but their more inward Mechanism, (of which, for Instance, one Extremity is the *Retina*, with respect to Ideas of Vision) even to their very Origination.

To make this clearer, let any one make this Experiment with himself. Let him, in a Place where he is most undiverted with real Objects, (in Bed of a Morning, in the Dark,

Mind, associated and as it were linked to those in View, or under real present Intuition; and he will then find that the Consciousness or Sensation is the same in both, and but differing only in Degree and Manner, as proceeding from a different Impulse differently exhibited [See *Self*. VII.] upon the same Organs subservient to actual Seeing. This may also serve for still further Proof and Illustration: For here Objects, immediately to succeed to View, are already almost realized to it before-hand, if he thinks at all about them; and here Primary and Secondary Sensation are joined or linked together, alternately succeeding one another.—The same Thing also happens in an infinite Variety of other Scenes: As for Instance, in going to Places of Pleasure or Entertainment, as Time and Place draw near, are not the Things in Expectation almost before his Eyes before he arrives? Or, when we see a strange Face a good deal like one we know that is absent which it puts us in Mind of, how are we conscious of the Likeness, or how can we compare them, but that the Consciousness or Sensation we have of both are of the same Kind or Genus, tho' of a different Species, the one being Primary, and the other Secondary, the Mind itself naturally and dextrously substituting the last for that Purpose (viz. of Comparing) in the Manner partly already, but that shall be further unfolded? For further Conviction still, that the Sensation is of the same Kind, look but upon any just Picture or Print, or well-drawn Prospect, of any Person, Thing, or Place, you know, and compare your Consciousness of what is before your Eyes with that it at the same Time raises in your Mind of the Original.—We are said to ruminate upon Things, to look back upon Things, to review Things in our Minds; all which Expressions, and numberless others, denote an Inward Organical Reframing, and a Secondary Consciousness, Sensation, or Feeling.

Dark, I always found to be best) take a View of any Place in his Mind he is very well acquainted with, (*London, Oxford, Cambridge, or Gloucester*, for Instance,) with that Intention as if he was to take a Draught of it; let him then mind, and he will find that his interior Parts of the respective Organs are in the same Disposition or Frame, and that he is conscious of a Sensation of the same Kind, as if he was actually seeing it; nay, he will even, as his Mind roams from Place to Place, find a slight Moving of the Eyes themselves.

The same Experiment may be tried with any other of the Senses, tho' not precisely with the same distinct Success, as their respective Objects are always unavoidably blended or associated with the Ideas of Sight.

In thinking or reflecting on Sounds, or Objects of Hearing, (especially Musical Ones) we naturally assist ourselves by associating the Voice, tho' in an almost imperceptible, low, under-breath Manner; and so on respectively as to the other Senses.

Here again I would have it remembered that all Sensation is properly Feeling; and that Seeing and Hearing any Thing are as much Feeling as when we handle a Piece of Ice, or feel a Bit of Velvet. Let it also be observed that, in all Primary Sensation, an Impulse from the Object upon the naked medullary Ends of the Nerves is absolutely necessary, which ever Organs of the Senses they belong to; as upon those of the *Retina*, the *Portio Mollis* of the Auditory Nerves, the *Papillæ Pyramidales* of the Skin, &c.

S E C T. V.

DREAMING, which is fancying we see, &c. Things when we are asleep, still further confirms what has been said; and, having mentioned it, I will here take a little Notice of that Phenomenon.

That Things, in Dreaming, seem to be real for the present proceeds partly from this, that, the Organs of the Senses being shut up externally, the Mind can have no Impulses from outward and real Objects to compare them with, and thereby perceive their Imaginariness; and partly, (as my Opinion for some Time hath been) that, in Sleep, they (the Organs) being somewhat inverted or altered in their Position, (the Pupils of the Eyes turning up, as may be seen in Children when their Upper-lids gently fall down as they go to Sleep,) the impulsive Cause, [See *Seet. VII.*] absolutely necessary in *Thinking*, exerts itself upon the soft, naked Ends of the medullary nervous Fibres, as well as upon the Outside of their Coats; which makes it resemble Primary Sensation.

This impulsive Cause may be exerted, for Instance, from the Inside of the Upper Eye-lids, (as well as from the Parts more contiguous) through the *Cornea* and Humours of the Eye, upon the *Retina*. And this seems to be the Reason of that almost infinite Variety of Images and Things seemingly floating and passing before us when we are upon the Confines between Waking and Sleeping.

It

It also proves that Dreaming, and Thinking that we actually See Things, &c. are done with the same Instruments that we actually See, &c. with, only the Impulse not being by the Mediation of the external circumambient Light, or Fire, &c.

And very likely to the Excess of this Inversion and Alteration of Position, perhaps, of the whole Sensationary Nervulous Machine is owing the Irrememberableness of some of our Dreams, and the Thoughts we had in them, when we awake, as the Dispositions or Frames cannot then be renewed. This, by Divine Appointment, seems to have been NEBUCHADNEZZAR'S Case, who, tho' he could not recollect and think upon the Particulars of his Dream, could by no Means shake off the Terror and Agony it had excited.

And to this Impulse also (from this Inversion) being exerted upon the naked Ends of the Nerves, as well as upon the Coats of their Sides, are owing perhaps all the *Phænomena* of our Dreams, (Things seeming real) with all our Modes of Thinking, Reasoning, and Reflecting in them, and every Association and Connection belonging to them; which still makes it further manifest that, in this Case, the nervulous Organical Disposition or Frame is the same with that when we *see* and *think* when we are awake, and that in both the last (*viz.* Seeing and Thinking) it is the same.

For the Mind is no more out of the Body (as some have been stupid enough to imagine) when we dream, than One is at St. Paul's Church in London when he chances to

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think upon that Grand and Noble Fabrick, at an Hundred Miles' Distance, when he is awake ; for we never dream we see or do any Thing but we always have a Consciousness of our being invested with our Bodies. 

And this fancy'd Reality seems to be the Reason also why Dreams make sometimes such strong Impressions on the Soul as to excite the Passions, 'till by the Excessiveness of these, as it often happens, the Organs are as it were disturbed out of their present Position and State of Laxity and Rest, and (the Doors being opened for other Objects with which we can compare our Dream) we awake and wonder at our Mistake ; and in those extremely pleasant or frightful this is commonly the Case.

Dreams therefore (especially our Thoughts in Dreams) for the most Part differ but little from Waking Thoughts or Ideas, I mean those of that Sort which Mr. LOCKE has observed to be continually floating before our Minds, (as he expresses it) whether according to the Direction of the Will or not, or those *nescio quid nugarums* which occur to our Meditation in our Walks and Lowngings.

The Incoherency also we observe in them, or the quick and almost instantaneous Shifting of the Scene, and unheeded Transition from one Thing to another, prove Dreams to be of the same Nature with those Reveries.

In Dreams we seldom or never have any Notion or Remembrance that we were ever in any other State, viz. awake ; but, when awake, we can remember our Dreams in Proportion to the Impressions they have made. The Reason

Reason seems to lie in this. The Mind never performs any of its voluntary Operations, whether in actual Seeing, &c. or in Remembering or Contemplating, &c. without the Organs: Now, when we are awake, they are in a State of Tensity, but, when asleep, in a State of Laxity, viz. their exterior Parts. Therefore Consciousness of Things present, or past, or Remembering, depending on the Organs being in the Condition they are in when we are awake, the Mind or Soul cannot, when we are asleep, know or remember that we were Yesterday awake, and now dream, because the Instruments it performs those Operations with are either not in Order or Tune, or already in Use, as in Primary Sensation, as before; for, the Instant we discover that we are Dreaming, we are awake, and look back on the Delusion with Wonder, having then fresh Ideas, or rather Objects immediately by the Senses, to compare those of our Dreaming with, whereby we see the Cheat.

But tho', for the most Part, we don't, when we are Dreaming, remember that we were awake Yesterday and then did such and such Things, and tho' we are not conscious that we only Dream; yet we often remember Things that are not then present, and which had happened in a waking State: Answer, These are commonly Things relating to what we are Dreaming of; for, when we Dream of particular Persons, Places, or Things, our Connections with them naturally and necessarily arise in our Minds from the common Associations of Ideas, of which more afterwards: For Thinking and Remembering in Dreaming are performed in the same Manner as they are when we are awake; and so far, however paradoxical

ical it may appear, we are really so, for in strong and vivid Dreaming we believe or fancy ourselves to be awake, that is, we seldom have any Notion or Suspicion to the contrary, having all the Self-consciousness and Secondary Sensations of one in that State. The Reason of all which seeming thus real, and so like Primary Sensation, I have already assigned.

But the most difficult Part to be accounted for in Dreaming is, that we are often conscious of remembering past Things, as having happened before in Reality, which, when awake, we cannot remember ever to have so happened. This must either proceed from what had happened in some former Dreams, which when waked out of we had absolutely forgot; which I think must be the Case, (for I have known Persons who have, when elevated with Drinking, said and done a great many Things that, when sober, they could neither think of nor remember 'till they were again in the same Condition as at first, and then they could clearly and distinctly) or else it must (one is almost inclined to believe) imply a State of vehicled Pre-existence.

In Dreaming we seem to exert every Faculty of the Mind, to will, to move our Bodies, and the exterior Parts of the Organs of the Senses (as we certainly do the interior) to See, to Hear, to Smell, to Taste, to Feel, to Think, to Remember, to Speak, lay Schemes, make Verses; to be agitated with every Passion, to Love, to Fight, to be pleased, angry, sorrowful, joyful, &c. All this is We, or is done by, our own selves, in the First Person, and to be accounted for as above. But when we are addressed

dressed to in the Second and Third Persons by others, and hear Speeches uttered with great Coherency and Strength of Argument, which we are conscious we did not by any means premeditate for them; I can see no Help for it (unless the Soul is possessed of more Divinity than we are aware of) but that, with the learned and ingenious Mr. BAXTER, we must admit of a separate Order of Beings, who (cloathed in excessively tenuious Vehicles, perhaps of Light or Fire, which they can contract or dilate, and alter in Colour and Shape, as they please, and thereby intraneously exhibit to us an infinite Variety of Scenes) can and do at some Times vastly affect and influence our Dreams, but still under the Direction or Permission of *the God and Father of the Spirits of all Flesh*: And I can see no other Way of accounting for those that are Symbolical*, Monitory†, or Prophetick, nor for the Second Sight, (that is, being in a Trance, like BALAAM, with his Eyes open, and seeing Things which certainly come to pass) heretofore common in the Highlands and Western Isles of *Scotland*, a Thing undeniable and well attested‡.

Is it not now from all this clearly evinced that
 Thinking and Dreaming are nearly of one and the
 D same

* Lord BACON says, 'I myself remember that, being in *Paris*, and my Father dying in *London*, two or three Days before my Father's Death, I had a Dream, which I told to divers *English* Gentlemen, that my Father's House in the Country was plaistered all over with Black Mortar.' See his *Sylva Sylvarum*, Century X. 986.

† See Multitudes of Examples in all History, Sacred and Prophane.

‡ See MARTIN and Others upon that Subject,

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same Species ; for here is no Candle, Sun, nor Moon, to present Objects of Sight by, more than there ; no real Noises, Smells, Tastes, or Feelings ; and yet the Soul has a Consciousness of them all, as if they were actually present*. And from the whole may it not be fairly concluded that the Postures, Frames, or Dispositions, of the Organs, with respect to their interior Mechanism, are the same in both as when we actually see, hear, smell, taste, or touch, any Thing when we are broad-awake † ?

* Indeed, for my own Part, tho' I am no *Hypniomancer*, I have had so many Experiences in Dreaming, in Confirmation of the Truths I am now declaring, that I am afraid to tell them, lest, in this sceptical, misled, fancied-self-wise Age, I should not be believed.

† Don't we sometimes wake with our Hands clenched or shut, as if grasping something, and sometimes the Whole Organical System in various other Dispositions, the Charm or Enchantment often continuing some small Time before it quite dissolves ?



S E C T. VI.

FOR further Proof and Confirmation of what has been advanced, to wit, That in forming our Ideas in every different Mode the Mind makes use of the same Instruments (inwardly adjusted in the same Manner) it does in Primary Sensation, (a minute and particular Account of whose interior Structure in the Medullary Substance of the Brain is never to be given by the nicest Anatomist: Sufficient it is we may be assured it is most curiously and justly adapted to every Purpose of Thinking) let the following Miscellaneous Remarks be just mentioned.

Our being often tired with Studying or Thinking, all one as with Bodily Exercise, proves it to depend upon the Use of the Organs, by the Mind's putting them in the same Disposition (in a greater or lesser Degree of Tensity, in Proportion to its Intensity of Cogitation) as when we actually perceive the Things that we are thinking on.

The Mind cannot consider Two Things at once any more than I can look both *East* and *West* at the same Time. *

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The

* For I can by no means believe the Story of JULIUS CÆSAR, (it being contrary to Nature, Reason, and Experience) who is said to have dictated to several Clerks while he himself was writing at the same Time, unless it was the same Letter to several Persons, which, whilst he was writing one of them himself, for the Sake of Dispatch he read out to the rest, having before meditated the Scheme or Orders it was to communicate.

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The great Difficulty and almost Impossibility of putting them in the very same exactly true Disposition or Posture is the Reason why our Thoughts or Ideas seldom exactly every way agree with the Things they stand for or represent when we come to compare them.

The more clearly and distinctly we Think, the Posture is nearer the same; the more faintly and confusedly, the contrary.

And hence it may be accounted for why Schemes laid for great Degrees of Happiness in this Life, or any other Purposes, often prove abortive; also the Vanity sometimes of studied Speeches and Behaviour beforehand.

The learned and ingenious Dr. CHEYNE, in his Method of Cure in Diseases of the Body and Mind, (Page 32.) says, 'What are the true primitive Material Organs employed in Thinking and Cogitation, what their Nature and Figure, is absolutely unknown, and, I fear, unknowable by us. That this Immaterial Principle, in its present State of Union, necessarily requires some organised Instruments in its intellectual Operations, as well as the Senses do, I think, is past all Doubt.

Page 34, 'We cannot but imagine that it is somewhere in, by, and with, our Brain that we think and consider.

Page 35, 'I imagine the Spiritual Substance uses Material Organs, of one Kind of Matter or another, in

‘ in its Operations; and it is highly probable that they
 ‘ are the Nervous Glands, the Filaments, the Nerves,
 ‘ but especially the Membranous Coats of the Infinite-
 ‘ fimal *Nervuli*, and their wonderful Texture and Me-
 ‘ chanism, so little known or understood.”

And (Page 36) he says, ‘ The Pleasure, Facility, and
 ‘ Elegance, of Cogitation consists in the Suppleness,
 ‘ Culture, and habitual Exercise, of those Nervous Or-
 ‘ gans, just as much as a graceful and easy Carriage and
 ‘ Manner of the Body is acquired by proper Exercise
 ‘ and repeated Acts. We must use this Sort of Exer-
 ‘ cise, and apply these Nervous Glands in Thinking, in
 ‘ the same Manner as we use the several Muscles, or
 ‘ widen and direct the Pupil to a proper Distance in
 ‘ Seeing: For Attention and Consideration we must fix
 ‘ these Material Organs of the Intellectual Faculty as
 ‘ we fix our Eyes to see, or discern distinctly, &c.”

Here he allows the Necessity for Material Organs for
 Thinking, (which, I apprehend, fairly implies it to be
 having Secondary Sensations, &c. see *Seet. I.*) but makes
 them different from those of the Senses, tho’ he will
 have the Materials for their Composition to be of the
 same Kind, to wit, little Nerves, and their Membra-
 nous Coats, and thereby gives the Mind Two Ma-
 chines, Two Sets of Working-tools, one for Thinking,
 and the other for Sensation or Feeling.

Had he only distinguished between the internal and
 external Mechanism of the same Organs, and hap-
 pened

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pened to hit on the Two different Kinds of Impulse (see *Seét. VII.*) equally and absolutely necessary, the one for Thinking, and the other for Primary Sensation, he had perhaps better succeeded in his Enquiry.

The aforesaid learned Bishop of C—KE also seems not to have been very wide of the Mark, when he says, (Page 149) ‘ The pure Intellect is properly the
‘ Immaterial Part of us acting in essential Union and
‘ Conjunction with the *Animal Spirits* and remote im-
‘ perceptible *Fibres* of the Brain, which are more im-
‘ mediately subservient to Thinking or Knowledge, and
‘ all the Operations of the Understanding.”

And, (Page 373) “ Now the Understanding and
‘ Will being principally the Operations of this pure Spi-
‘ rit, tho’ they are necessarily transacted in Concurrence
‘ with Material Organs, &c.”

Does not this also imply, that in Thinking we have a Sensation or Feeling (which I call Secondary) very analogous to that which we had at first from the Impulse of the real Object itself?

The good Dr. WATTS also says, (Page 80 of his Philosophical Essays) ‘ When we set ourselves to Think
‘ or Study, we feel and are conscious that we employ
‘ some operative Power or Powers within the Scull, and
‘ perhaps generally a little within the Forehead: And
‘ the Reason why we feel it there is, because the Cor-
‘ poreal Motions and Traces are there formed and pre-
served,

‘ served, and renewed, which serve to raise or awaken
 ‘ Ideas in the Mind, and which are ordained to mi-
 ‘ nister to the Soul in its Intellectual or Sensitive
 ‘ Operations while ’tis in this united State.’

But (to have done with endless Quotations) all of them, and all the Logical and Metaphysical Writers I ever read, having been unacquainted with this new Hypothesis, into what strange Wanderings and erring Contemplations have they been led! In what Sapientifamiliar Deliriums have some of them coolly raved! What Volumes have been written! but how unsatisfactory! (see *Seet. I. IV. and VII.*) However, so far only, I mean, as regards the Subject in hand. And I don’t know but it might have been proper enough to have entitled this Dissertation, *Rei Metaphysicæ in Rem Physicam Reductio*, that is, *Metaphysicks reduced to Physicks*; as such a Reduction I believe it will be allowed to have, in Part at least, effected.

To return,—Does not the various Influence different Climes, and different States of the Air, in clear and in hazy Days, have upon our Ways of Thinking also testify, in a great measure, the Dependance it has upon the Organs of the Senses? Does not the Memory, as well as the Eyes, fail?

But (what had been almost forgot) the excessive Longing of some pregnant Women, and consequential Marking of the Fœtus if not gratified, is, in my Opinion, one of the strongest and most illustrating
 Proofs

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Proofs that the interior Organical Disposition is the same in Thinking as in actual Perception that can be adduced.

In this Case the Mother is, with great Solitude and Earnestness, perpetually revolving in her Mind the Object of her Desire. Now the Fœtus wonderfully, in all Respects, and in every Affection, participates with the Mother. She, perpetually conversant with, and conscious of, her Own Self, Parts, Affections, &c. naturally and easily communicates to it every Disposition she is in possession of: And it being then in the first Stage of its Formation, and the component Fibres of its Parts of such exquisite Fineness and Exility as hardly to be conceived, and being also in a prodigious rapid Progress of Increase, changing every Moment in Degrees of Magnitude from a lesser to a greater, the Disposition soon becomes so fixed and confirmed that it can never after be altered.

To this Self-conversation, Consciousness, and Communication, on one side, and Participation on the other, perhaps it is owing that all Parents so naturally and easily stamp upon their Offspring the distinguishing Figure and Shape of the Species they belong to throughout the whole Animal Genus or Kingdom. *

* See *Genes.* xxx. 37 and 38, and that amazingly-beautiful *Psalms* cxxxix.

S E C T. VII.

BY this Time I hope it appears pretty plain that there is the highest Relation, Analogy, or Resemblance, between Seeing, Hearing, &c. and Thinking and Dreaming that we see, hear, &c. almost as great as between the Light of the Sun and that of a Candle, or the Moon. Now, in the first Case, it has been shewn that our Consciousness arose from an Impulse, made from a real Object, upon the external Extremities of the Nerves, by the Mediation of Light, Air, &c. What excites our Consciousness then in the Second? Can it be done without an Impulse? By no Means. The Necessity of it seems self-evident; for, as our Consciousness here is of the same Kind with that there, an Impulse is equally necessary.

What then (as in strong Thinking and Dreaming there is no real Light nor Sound, &c.) can mimick it so naturally as to make it appear so nearly like the First? To say it is the Mind itself would be ridiculous and absurd; it would be making it, which ought reasonably to be supposed residing in the Center of, or intimately united with, its Machine of Consciousness, beginning and directing its Motions and Dispositions, in order to receive its Intelligences, to be at the same Instant at the Doors or Windows upon the Surface, giving the intelligentiferous Impulses themselves; which would be a most glaring Contradiction.

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Whence

Whence then can this Impulse spring? Let us consider what Effect pressing any Thing hard upon the Eyes, or giving them a smart Blow in the Dark, has, and we shall have a successful and fruitful Hint given us in this Enquiry.

Here, from the sudden, undulatory Jumble of the Watry, Cryſtalline, and Glaſſy Humors upon the *Retina*, beſides the Pain from the Contuſion, we are conſcious of a Senſation like a Flaſh of Fire or Lightning.

Whatever then can perpetuate this in a more tolerable, gentle, uniform, and lower Degree, will be the Grand *Deſideratum* we are looking for.

Now, the Glorious and All-ſkilful Builder of the Human Fabrick (*it is He that hath made us, and not we ourſelves*) has been very far from leaving it defective or unfinished in this Point. The Heart and Arteries, and from them the *Syſtole* and *Diaſtole* of the *Dura Mater* of the Brain, are perpetually at work to answer, among others, this particular End.

However, I do not ſay that we have our Ideas by Thumps, or that their Succeſſion or Duration is exactly in Proportion to the Quickneſs of the Pulse. And yet we find ſomething like it in Febrile Deliriums, (whether aſleep or awake) where the Thoughts are confuſed, quick, and tumultuous, as the contrary may be obſerved in Melancholy; which, by the by, ſeems to bid

bid fair for accounting for Mr. LOCKE's ingenious Conjecture that the Train of Ideas do succeed one another at certain Distances of Succession which cannot be much delayed or hastened, from which, I must frankly own, I had also a most useful Hint in my seeking after this impulsive Cause, which I found to be wanting and indispensibly necessary in Secondary Sensation or Thinking.

All I would suggest is, that the quick, tremulous Motion of the Animal Spirits, or Fire, in the Nerves, occasioned by the Impulse of the Object in Primary Sensation, seems in Secondary to be excited and kept up by the continual Pulsation of the Arteries, which accompany the Nerves every where, even in their minutest Ramifications throughout the whole Body.*

This Impulse then in Secondary Sensation is not upon the denudated Extremities of the Nerves, as in Primary, but lateral, or side-long, upon the Coats they have from the *Meninges* of the Brain; which is the Reason that *Thinking* bears such Analogy or Resemblance to actual Sensation, as *Seeing*, &c. tho' not exactly the same.

E 2 SECT.

* Anatomists tell us that, 'The Nerves do ordinarily accompany the Arteries thro' all the Body, that the Animal Spirits may be kept warm and moving by the continual Heat and Pulse of the Arteries. They have also Blood-vessels, as the other Parts of the Body: These Vessels are not only spread upon their Coats, but they run also amongst their Medullary Fibres, as may be seen amongst the Fibres of the *Retina*.'

S E C T. VIII.

THESE Points being settled, let us now try if we can, upon the Principles of this System, account for our various Ways or Modes of Thinking.

Thus then, when the Mind would see any Thing again in Fancy (or, rather, would fancy to itself any Thing again) it has seen before in Reality, it puts the respective Organs in the same Frame, or their Nerves in the same Posture or Disposition, as when it actually saw (or perceived by any of the Senses) the Things it would now in Fancy see or perceive again; and receiving at the same Instant successive Impulses from the Arteries as before-said, (which are commonly vastly fainter than the Impulse from the Object itself, as a small Touch is to a great Twang upon any String of any the same Musical Instrument, or low Whispering to loud Speaking) it has then, in a lower Degree, the same Kind of Consciousness or Sensation it had before. And this is what may be called *Remembering*, or the *Memory*.

Its keeping the Parts in the same Posture, Disposition, and Tensity, accounts for what is called *Contemplation*.

This done with Vigour accounts for *Intention*.

Its

Its trying several Postures, &c. before it hits the right accounts for *Recollection*. Our earnest and sometimes fruitless Endeavours to remember some Things clearly shew that different Objects strike the Organs into different Positions or Frames; and that the Mind or Soul is only volitive or active in thus labouring to renew or restore those Dispositions, but passive when it has done it, having that Instant the wished-for Consciousness, Sensation, or Remembrance, by the incessant Impulse of the Arteries. Trying several Postures in this Operation is also clearly evinced by the Variety of Thoughts which occur before the right one.

From the same Principle and Power of Consciousness and Volition, and with the same Instruments, it still can employ itself, and operate further on its Ideas thus formed, in ranging, comparing, dividing, altering them in every Predicament, &c. And from this springs what is called Judgment, Reasoning, Illation; on which, as there is hardly any Thing more that is new to be said, it cannot be expected that I should expatiate. I shall therefore, for further Satisfaction, refer to Writers in Logick, as BROWNE, LOCKE, WATTS, &c. who all of them have treated this Part of my Subject with great Perspicuity; the Task I imposed on myself being chiefly to give a Physical *Rationale* of the Formation and Association of our Ideas, and of Thinking in general; which how far I have succeeded in I leave to the Determination of the judicious and candid Reader.

It is next to impossible for us to keep the Parts always
 E 3 in

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in the same Frame; for we find we tire with Thinking as well as with other Exercise: Besides, we cannot avoid being diverted with new Objects; and from this springs what is called *Forgetting*.

But sometimes, when we are surprised by any sudden Accident, we cannot directly forget it as soon as it is past, the Parts still continuing in the same Frame, (and the same Impulse continued also) 'till by Degrees, they, as it were, sinking out of their Posture, we at length cease to think of it, *i. e.* forget it, notwithstanding the *Impetus* of the small Arteries continues. Hence we come to say, after any unexpected Thing has happened, and is past, we cannot forget such a Thing yet.

I will now suppose myself actually to see, for the first Time, some particular Mountain, Hill, or remarkable House; I cannot help, at the same Time, seeing the Hills, Fields, Valleys, Trees, Houses, &c. adjoining, though perhaps I do not view them with that particular Attention I do the first. Now, when I come to think on this Mountain, Hill, or House again, I naturally put the respective subservient Organs in the same Disposition or Frame as when I actually saw it, and the Places adjoining, at first: So that, when the Impulse is made, all the contiguous Parts appear together in the same Scene; that is, tho' my Design be only to contemplate it in particular, yet I cannot avoid, at the same Time, contemplating, or thinking on, in some small Measure, the Parts about it. This to me seems to be the most rational Account that can be given for what is called the
 Af-

Association of Ideas, or their being linked together : And hence we may see how it is done when we say, when we see or hear any Thing we have seen or heard before, it puts us in mind of such and such Things.

There are some particular Tunes which, whenever I hear played, bring a Variety of Persons and Things into my Mind which had happened when I first heard them, which, but just before, I had no Thoughts about. The same also happens from some particular Smells, Tastes, &c. and may all be accounted for the same Way.

And to this Association and Connection, which universally prevail through all Things every where, is owing that natural and easy Transition from one Thing to another which we observe in our Thoughts, or Ideas, and in Conversation when we cloathe them with Words.

The Organs, as to their exterior Parts, (the Muscles and Nerves subservient to the Moving and steady Fixing of the Eyes, for Instance) must certainly be in a State very lax, when we think or study, to that when we are actually giving Attention to real present Objects ; for it is very manifest, when we contemplate any Thing deeply, we endeavour, as much as we can, to take no Notice of the Things that are about us ; which is nothing but relaxing them (the Organs) as much as we are able, that the Impulses upon them from real Objects may not be so much perceived or felt ; yet their Posture or Disposition, as to their interior Parts, with regard to what we are thinking on, is the same as if we were actually looking at it. And hence

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hence the Inattention, and Absence in Thought, which sometimes happen to some People in Company.

As the almost infinitely small Arteries make continually impulsive Pressures upon the equally small Fibres of the Nerves, it is possible we may have Secondary Sensations at the same Time that we are having Actual Ones, though we do not seem much to perceive or regard them. Look upon a Tree, House, or other Object, and immediately shut your Eyes, (keeping still thinking on it) and you will find something like it.

This may be further illustrated by lighting up a Candle, in a Room with the Windows open, in the Day-time: Its Light will be then so absorbed by that of the Sun, that you will hardly discern it: But, shut the Windows close, and draw the Curtains, and it will have its full Effect.

Our Nerves being so exceeding fine, so variously placed, and almost infinite in Number, (having all some Consent with one another, more or less) and so capable of an infinite Variety of Dispositions, or (if the Word may be allowed) Combinations, and from thence of having innumerable different Impulses made on them, is the Reason we are capable of having so many various Sensations (with their several Associations) in Reality and Fancy as we have.

Dr. CHEYNE says, (Page 12. of his fore-cited Book)
' The learned Dr. PORTERFIELD very justly concludes
' from

‘ from Dr. Hooke’s determining the *Minimum visibile* under an Angle of one Minute, that the Magnitude of a single Nervous Fibre cannot exceed the 3600th Part of a common Hair.’ How infinitely numerous then may not their *Papillæ*, in the *Retina* for Instance, be! What an infinite Variety of Impulses and Dispositions may they not be capable of receiving from a Mechanism (perhaps of a peculiar Kind) utterly elusive of the Anatomist’s Ken, tho’ assisted by the best Glasses, as much as the Mouths of the Lacteals! Perhaps, in Sleep they retract, slip in, or retire behind or under the Fine Arterial *Plexus*, or Net-work, and so their naked Ends come in Contact with its Pulsatory Coats; which is the Reason I have assigned for Things appearing real in Dreaming. * [See *Seet. V.* at the Beginning.]

S E C T. IX.

NOW in all this Procedure there is nothing but pure and simple Mind and Matter, Volition and Perception, Activity and Passivity. How trifling then must it be, in Logical and Metaphysical Writers, to make so many needless Distinctions between *Πνεῦμα Spiritus*, *Nēs Mens*, and *Ψυχὴ Anima*, † for which they alledge Scripture-proof, and between
F *Ani-*

* MOSES possibly was no Stranger to all this, as may be conjectured from several Passages in the Pentateuch, particularly *Gen. ix. 4.* and *Levit. xvii. 11.* tho, being under no Necessity of so doing, he did not read any Lectures in Anatomy, or Natural Philosophy, to the Children of *Israel*: For on the Circulation of the Blood depends Animal Life or Feeling; as that, together with the Impulse in Secondary Feeling or Thinking, depends upon the Perpetual Motion of the Heart and Arteries. Take the Blood away, and every Thing ceases, Circulation, Sensation, and Impulse. But Commentating is not the Business at present.

† Might not St. PAUL’s Expression, (1 *Thessal. v. 23*) ‘ May the Whole of you, the Spirit, the Soul, and the Body,’ &c. be owing to some peculiar Idiom of the Language he wrote in? Are not we taught, from the same first and best of Books, the Holy Bible, that our Duty towards God is to love him with all our Heart, Mind, Soul, and Strength? And is it not common in Conversation, when strong Professions of Sincerity are made, to say, ‘ With all my Heart and Soul?’

Animus and *Anima*, † &c. and ridiculous and absurd to call the Memory and Imagination (which in Fact is a Faculty of the Mind proceeding from Volition and the concomitant Impulse) a Storehouse, as it were, with Bags, Shelves, and Drawers, to lodge Ideas in, and, at the same Time, to compare these to Impressions, such as a Seal makes upon Wax, (when Impressions are worn out, how are they to be renewed without a fresh Application of the Seal?) Footsteps, Traces, &c. || and the Mind at first to a *Tabula rasa*! § But thus have these abstruse Gentlemen perplexed and puzzled themselves and their Readers from the Days of ARISTOTLE down to the present Times.

Nor

† Under the Word *Anima*, in the Dictionary, I see, *Anima enim propriè eam partem quâ vivimus, movemus, & vigemus, Animus autem eam partem hominis quâ differimus, sapimus, immortales sumus, significat*. What elegant Stuff here is! With equal Propriety might *Anima* be compared to some careful vigilant Miller, standing by his Hopper, superintending and regulating the Motions of his Corn-grinding Machine, or to some Head-servant in a Family, doing and ordering the Business within Doors, while *Animus*, the Master, in a more elevated Station, makes Excursions to, (as Occasions invite) or receives Visits from, the surrounding Neighbours. I am inclined to think that the Work here allotted to the first is rather done by the Supreme Omnipresent Being himself, or what a Great Philosopher calls *Anima Brutorum*:

For in Him we live, and move, and have our Being. ACTS. xvii. 28.

Ab Jove principium musæ: Jovis omnia plena. VIRG.

|| As justly may a fine Singer, or Performer upon any Musical Instrument, who can perhaps sing, or play, several Hundred Songs, Tunes, or Compositions, without Book, be said to have them all safely repositèd in the Brain, and be conscious of them all separately at once; whereas they can only sing or play them one after another, as they can have successive Second-hand Auricular Sensations of them, or think of them, or are put in mind of them by others.

The contrary also every Author who writes History, or upon any other Subject, must experience; and that in Thinking, or having Secondary Sensations of Things, the same Order of Succession obtains as did at first in the Primary Ones, or Original Transactions to be recorded.

§ To this, (viz. *Tabula rasa*) with far less strained Analogy, might be likened the Eyes, Ears, and Skin, of a new-born Child, who never before saw the Light, heard its own Crying, or the Chat of the Gossips, or felt the cold Air, or a Pin stuck in it by an awkward Nurse.

Virgo intacta, I should think, might do better.

Nor does the learned Dr. CHEYNE's Account (the latest Author I know that has attempted a rational one of the Formation of our Ideas) seem to be much more satisfactory, or intelligible, where (Page 94. of his Book, twice already mentioned) he says,

‘ I can conceive the Matter no otherwise than thus : The
 ‘ Mind or Soul is the self-moving, self-active, sentient, and
 ‘ intelligent Principle, with limited but invariable natural
 ‘ Powers of Living and of Thinking, Free-willing, and be-
 ‘ ginning Motion in those Bodies whose Passivity or *Inertia*
 ‘ is not superior to its active Powers. How it exerts these
 ‘ Powers on divinely organised Matter I do not here pretend
 ‘ to say ; but I conceive it acts on the Organs by Means of
 ‘ the Mechanism of the Brain and its Nerves, which are an
 ‘ Infinity of differently situated, complicated, and stretched
 ‘ little Filaments or Fibrils, filled with a soft, milky, cellu-
 ‘ lar Substance, (like a Rush with its Pith) contained in
 ‘ small, membranous, extremely elastick Sacks or Tubuli,
 ‘ all whose elastick and energick Virtue consists in the proper
 ‘ Tension or Vibrations of these Sacks or membranous Coats,
 ‘ spread over all the Solids of the Body, which being ex-
 ‘ tremely elastick and springy convey harmonious and di-
 ‘ vinely-proportioned Vibrations, Undulations, and Tremors,
 ‘ excited outwardly by Objects to this sentient and intelligent
 ‘ Principle ; and reciprocally the Soul, or self-moving Prin-
 ‘ ciple, impresses proper Vibrations and Tremors on these
 ‘ Infinitesimal Membranous *Sacculi* to the respective Organs
 ‘ of Sense and Muscles : And thus Sensation, Perception,
 ‘ Images, Ideas, and Muscular Motion, may be performed.’

Muscular Motion, to be sure, may with great Propriety

be said to be *performed*; but with what Propriety, in the present Case, Sensation, Perception, Images, and Ideas, can be said after the same Manner to be performed; or how the Soul reciprocally impresses proper Vibrations and Tremors on these little Sacks to the Organs of Sense, in order to perform these Ideas, &c. I protest I cannot understand.

Material Objects certainly excite a Vibration, or something like it, in the Nerves, and to make the Soul conscious or sensible of their Presence; but to make it reciprocally impress this Vibration to the Organs of the Senses implies it (as I take the Thing) to be at some Distance from these Organs, and yet at the same Instant in them, and sensible of the Sensation, Perception, Images, and Ideas, thereby performed. This to me is all *Hocus Pocus*, *Legerdemain*, Darkness, Mystery, Perplexity, Contradiction.

I think I have demonstrated that the Soul is passive in all Sensation or Perception, and only performs, or is active, in moving the Body, and framing its Nervulous Sensationary Machine into proper Dispositions or Postures, for the Reception of Images and Ideas by Impulse.

But indeed he goes on with more Clearness, and concludes the Article thus—‘ This is the best Idea I can conceive in these abstruse and obscure Distempers, which I only propose as a Philosophical Conjecture: Others may explain the Matter better, if they can.’

How easily now does my Hypothesis, or Supposition, that Thoughts or Ideas are only Secondary Sensations or Feelings of Things, (the Truth of which any one may observe, experience

perience, and convince himself of, when in the Dark, in a proper Composure of Mind, he *thinks* intently upon any Thing) and that all Sensation or Feeling requires an Impulse, solve every Difficulty !

His Emblem of the Operations of the Mind on the Body, or comparing the Soul to a skilful Musician shut up in a fine Organ-case, may, by way of Metaphorical Allusion, be admitted.

However, his Sentiments and Rules concerning the Preservation and Restoration of Health, and making Life happy and Death easy, are certainly just, and worthy of the greatest Attention and Regard.

S E C T. X.

I Should now take some Notice of those strong and violent Affections of the Mind called the Passions, but at present shall only give some brief Hints concerning them, and leave the further enlarging upon, Explication, Discussion, and Illustration, to another Essay.

As they seem to bear a strong Analogy and Resemblance to Two of the chief Properties of a Magnet, Attraction and Repulsion, I shall accordingly range them into Two different Classes, calling one the Attractive, and the other the Repulsive Order. [See *Sett.* III.]

Of the First are Desire or Longing-for, Hope, Joy, Complacency, Glory, &c.

Of the Second Order are Detestation or Loathing, Hatred, Fear, Grief, Anger, Shame, &c.

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Those of the First Order may again be divided into those attended with strong but successful Volition, as eager Desire, Love, &c. and those attended with Volition successful, as Joy, Complacency, Glory, &c.

And those of the Second Order may also be divided into those attended with strong and successful Non-volition, as Detestation or Loathing, Hatred, Anger, &c. and into those attended with Non-volition successful, as Fear, Grief, Shame, &c.

Desire or Longing is that uneasy Sensation, that Impatience, Unsatisfaction, and Pain we feel when the Organs of any of our Senses are put into a Disposition to receive Impulses from a real Object, which we believe to be extremely agreeable, and there are none made.

They are put, or as it were start, into that Disposition from our believing (or from our Information from any of the Senses the Object of the Desire does not immediately belong to) that the Object is, as has been said, extremely agreeable, near at Hand, and within our Reach.

Detestation or Loathing is when any extremely disagreeable Object is approaching or present, and the Mind refuses to frame the Organs into any Posture or Disposition to receive Impulses from it; as to see a Serpent, or an Enemy, at Liberty to hurt, or any Thing we have an extreme Aversion to; or to hear the Voice of an Enemy, or Thunder; and so on of all the other Senses.

And from these Two Original Sources, all the Passions of each Order, with all their Subdivisions, Blendments, Mixtures,

tures, Complications, and vultuose Appearances, I believe, will be found to proceed. *

S E C T XI.

IF it should be asked, What is the Mind, or Soul, that is thus active and passive in all this Variety, answer, As it cannot be its own Object, in the Manner other Objects are presented to it, (being, with regard to that, only self-conscious) perhaps, in this State, and in the Manner we know Things at present, we shall never be able exactly to know what it is, but only what it is not; and that is, that it is not Matter. I shall therefore take the Liberty to give it a new Definition, and call it an *Aliquid immateriale materiam movens & sentiens*; that is, an immaterial *Something* that can at its Pleasure (the Will) order and direct the Loco-motion of its Vehicle, (the Body) and the various Dispositions of the exterior and interior Mechanism of the Organs, and Common Sensory, in order to receive Impressions from real Objects, and renew these Dispositions when it inclines to have those Impressions repeated, (the Objects themselves being past, or absent) receiving then the Impulse from the Heart and Arteries.

As there can be no Doubt of its being of Divine, Heavenly Extraction, perhaps its inmost Case, or Wrapper, is Fire; for that is the finest Kind of Matter that we are acquainted with; and that Matter and Mind are intimately united (how-
ever

* Tho' One may philosophise upon, and know something more of, these Matters than his Neighbours, it does not follow from thence that he should be divested of them, or exempted from their Effects; any more than One, who knows that immersing in Water will suffocate, or that a great Number of the Sun's Rays is hurtful to the Eyes, is exempted from the Consequence of being kept under Water for some Time, or his Eyes from the Effects of too strong a Light. A lame Dancing-master may be capable of teaching a Minuet exactly, when he can by no Means move gracefully himself.

44 THOUGHTS *upon* THINKING, &c.

ever inexplicable the Manner) I believe will be denied by none: But perhaps a Kind of Fire exceeding the Sun's in Fineness as much as that exceeds Culinary Flame*. St. PAUL says, ' At Mid-day, O King, I saw in the Way a Light ' from Heaven, above the Brightness of the Sun, shining ' round about me and them which journeyed with me.'

Inthroned then thus in Fire, the Soul, when it gives little or no Attention to any Thing, is (comparatively) in its peaceful, native, original State. Upon the emerging of any Object, (which ever of the Senses it belongs to) it is, as it were, roused from this Inattention. In order to consider this Object justly and exactly, it must put the respective Organs in such a Disposition as that it can receive true Impulses from it, sufficient to make up its proper Idea; which it does. And, as all Objects differ, more or less, (even those of the same Sense) so the Modes of their Impulses will be various, and accordingly variously affect, strike, or give a Disposition to, the interior Parts of the Organs: In the Sense of Seeing, for Example, the Object strikes the *Retina*, and the Sensationary Ducts adjacent, into a Disposition, or Frame, they were not in before.

Now

* The Living Spirit is instantly extinguished if it be deprived either of Motion, or of Refrigeration, or of Aliment. *Can.* 31. Flame is a momentary Substance, Air a fixed: The Living Spirit in Creatures is of a middle Nature. *Can.* 32. See Lord VERULAM's History of Life and Death, *Canon* xxxi. and xxxii. with their Explications, in which are the following Passages. Explic. 1st, Now the whole Fabrick of the Parts is the Organ of the Spirit, as the Spirit is the Organ of the Reasonable Soul, which is Incorporeous and Divine. Explic. 2d, This Matter stands in need of an higher Indagation, and of a longer Explication, than is pertinent to the present Inquisition. Mean while we must know this, " that Flame is almost every Moment generated and extinguished; so that it is continued only by Succession: But Air is a fixed Body, and is not dissolved:" and further on, " But Spirit is participant of both Natures, both of Flame and Air, &c."

Now Thinking in general entirely consists in this: When the Soul wants to review or reconsider any Thing in Fancy it has actually viewed or considered before, it gives the Organs (their interior Parts) the same Frame and Disposition they had from the First Impulse, and the Second is instantaneously given by the aforesaid small Arteries; and thus it renews, or has renewed to it, its former Sensations or Consciousness of Things after they are past and gone. It renews, I suppose, those Frames and Dispositions (originally struck by real Objects) some-how after the Manner of Contraction and Dilatation of its Sensationary Nervulous Machine (which, I take for granted, it is intimately united with, and resides in) *ab intra*, not by Impulse *ab extra*.

This Reframing I call the active Part of Thinking. Receiving at the same Instant the Impulse from the Arteries I call the passive Part.

Thinking, or having Secondary Sensations, then, must be the Result of the Mind's thus renewing the Dispositions or Frames, and receiving at the same Instant the Impulse from the Arteries. In the First the Soul is active; in the Second it is passive. And this general, soft, uniform Arterial Impulse, in Secondary Sensation, (which we are conscious of having in strong Thinking and Dreaming) universally supplies, in every respective Organ, the Place of that which we have by Light, Air, Effluvia, and immediate Contact, from Real Objects in Primary Sensation.

And this is the Sum of all, viz. how the Soul acts, and is acted upon, in Conjunction with the Body, or in Union with Matter; the various Ways of which we have been accounting for.

I often re-act in my Mind many agreeable Scenes, sometimes melancholy ones, that are a long Way and While distant and past; and have at Times (as well Sleeping as Waking) many beloved Objects, almost realised, before my Eyes, (my Mind's Eyes I mean, with SHAKESPEAR) that Death and the Grave have been long in Possession of. How begins, what compleats, the Formation of the pleasing *intraneous Phantoms*, whence the Light, the Air, &c. whence the Impulse, if not as I have said?

*Now to GOD, (who, according to MOSES and St. PAUL, is a Consuming Fire, and who, according to the Old Philosophers, resides * in Fire) All-wise, Almighty, and All-benign, (as such a Being most assuredly there is, who has so fearfully and wonderfully made us all, Soul and Body,) be all the Glory.*

* See BOERHAAVE's Chymistry, Vol. 1st. Page 112. DALLOWE's Translation.

P O S T S C R I P T.

† A great deal more might have been said to illustrate this (shall I venture to call it) New Philosophy of the *Human Mind*, some Things being perhaps too slightly touched, left unfinished, or not sufficiently proved; and every Section might have been spun out to a far greater Length, and many more added. But, being perpetually interrupted by Avocations of a different Nature, (which must be my Excuse for Inaccuracy and every other Fault) I must leave the Whole as Hints to others, to object to, refute and condemn, or improve and confirm, as they shall see Reason for; and for the present conclude.

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NEWENT,
March 14, 1755.

J. R.

A LETTER to the Learned and Ingenious Dr. C. M.

One of the late Secretaries to the R. S.

Upon the foregoing SUBJECT.

SIR,

I Have re-considered, as you desired, the *Affair of the Arteries being subservient to the Memory and Thinking*, and beg Leave to lay my Sentiments before you.

1st, — I suppose it will be granted that our immediate Knowledge of Material Things round us is by or from Sensation.

2dly, — That Sensation cannot be without an Impulse made from the Object upon the Organs of our Senses, whatever Way that Impulse may be carried to the Common Sensory, whether by Vibration, Undulation, or the Third Way of BOERHAAVE which you mentioned, or any other not yet discovered; that being, as I take it, out of the present Question.

3dly, — In reflecting upon Things past; I have, for Instance, seen you, --- the first Time at Sir HANS SLOAN's, and can remember your Person and Dress, what Sort of Weather it was that Morning, and the Situation of the Houses and Streets, --- the other Time at your own House, and can remember the Position of your Parlour, the Lady and Gentleman that breakfasted with us, the Pictures, Chairs, with other associated Objects. I say, when I reflect upon all these Things, now they are past and absent, and at an Hundred Miles' Distance, with some Intention, in a Place where I am uninterrupted with real Objects of any Kind, I am conscious of a Sensation of the same Kind, though in a vastly fainter Degree, and find my Organs in the same Frame or Posture, in Proportion to my Clearness or Fustness of remembering, as when they were actually present. (And indeed our lively Dreams are, in my Opinion, further and clearer Proofs that the Postures of the Organs are the same, and the Sensations of the same Kind, when we review Things in our Minds, as when we actually perceive the real Objects themselves: All which to me is evincing that the Memory is a Secondary Sensation of Things absent or past.)

4thly, — All this granted, viz. That our immediate Knowledge of Material Things round us springs from Sensation; That an Impulse from the Object upon the respective Organ is indispensibly necessary for that Sensation; That, in remembering Things absent and past, we find the Organs of our Senses in the same Frame, in a Degree proportionable to the Intention and Clearness we Think with, as when they were actually present, and have a Sensation of the same Kind, though in a vastly fainter Degree, which I call Secondary; whence is the Impulse for this Secondary Sensation? for certainly, it being a Sensation of the same Kind with the first, an Impulse is as absolutely requisite. Is it the
Mind

A LETTER, &c.

Mind itself that makes it? The Mind, as I have observed, is entirely passive in all Sensation, and only active in moving our Bodies, and putting the Organs of our Senses in proper Dispositions; and therefore it cannot be the Mind itself. What is it then? Why I can find nothing but the Pulsation of the Arteries: And who knows but that this may be one of the Ends for which the Almighty and Infinitely-wise God contrived for the Heart and them a perpetual Motion!

5thly, — *If these Arguments should not be thought strong enough, let it be considered, That, if, in Thinking or Remembering, the Posture of the Organs, and the Sensation, be the same as when we actually perceive real Objects, which I think is beyond all Doubt, then for the Mind to be residing in the Common Sensory, (if Locality may be allowed Immaterial Beings, which in the present Case, in a peculiar Sense, I think may, notwithstanding the quaint Arguings of some Philosophers to the contrary; for with what Propriety of Expression can we talk of the Union of Body and Mind, if no Ubi, or Whereness, may be allowed to the last?) there to receive Intelligences from Impulses, and at the same Time to be making the Impulses at the other Extremities, and all along the Sides of the Nerves, where the Postures are framed, is certainly a Contradiction. Besides, it would be dividing the Soul, which is in its Nature simple and indivisible, and making one Part of it Material, and the Object to the other; which would be ridiculous.*

6thly, — *To conclude, let it be observed, That the Motion of the Heart and Arteries is involuntary; that, when we are awake, and do not give Attention to real Objects, we cannot help having Ideas of one Thing or other; and that, in Synopes and other Cases, where there is a total Cessation of the Pulse, there is no Sensation of any Kind whatever, neither actual nor imaginary, though the Nerves may then be in a sound State. But I foresee it will be objected to this, That the Nerves are not then in a proper State for any Kind of Sensation; witness the universal Relaxation of the Body. To this I answer, There is as great a Relaxation in healthful Sleep; and yet we then have lively Sensations, as has been before observed: But I never heard of any that had a Dream in a Fainting Fit, unless a Confusion of faint imaginary Sight and Sounds, at the going in and coming out of it, may be called such; which is easily accounted for.*

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I am, Sir, &c.

J. R.

